

Additional Blessing

$t\bar{t}$ CROSS-SECTION WITH JET PROBABILITY

Gervasio Gómez, Enrique Palencia, Teresa Rodrigo,

Luca Scodellaro, Rocío Vilar

Instituto de Física de Cantabria IFCA

TOP Meeting

September 2, 2004

Outline

- Summary of statistical uncertainties

Source	Fractional Stat. Uncert.	Contribution to $\sigma_{t\bar{t}}$
Signal Acceptance	1%	1%
Mistag Matrix Prediction	2%	0.2%
Non- W Fraction	17%	0.3%
Non- W Prediction	34%	3.7%
$W+HF$ Prediction	4.1%	0.8%
Other MC backgrounds	2.7%	0.2%
Observed data	+14%, -12%	+22%, -20%
Total Statistical Uncertainty		+22%, -20%

Outline

- Summary of systematic uncertainties

Source	Fractional Sys. Uncert.	Contribution to $\sigma_{t\bar{t}}$
MC Acceptance Modeling	8.7%	8.9%
Tagging Scale Factor (b's/c's)	13/20%	16.6%
Mistag Matrix Prediction	+20%	-3.1%
Non-W Fraction	50%	0.8%
W+HF Prediction	50%	7.4%
Other MC backgrounds	30%	6.1%
Luminosity	1.8%	0.1%
Total Systematic Uncertainty	5.9%	6%
		+22%,-22%

$$\sigma_{t\bar{t}} = 5.8^{+1.3}_{-1.2} \text{ (stat)}^{+1.2}_{-1.2} \text{ (syst)}^{+0.3}_{-0.3} \text{ (lum) pb}$$